

**Compensatory control over health crises: Belief in a just world and resilience  
among cancer patients and residents in pandemic**

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## **Abstract**

### **Background**

Recent research suggests that belief in a just world (BJW), in which good deeds get rewarded and bad evils were punished, could provide compensatory resources among those lacking control over their lives. However, little is known whether BJW could function in coping with medical disorder and how the sense of control was restored in promoting resilience, especially in the suffering from cancer and pandemic. Therefore, two studies were conducted to examine the association between BJW and resilience among those lacking control during the cancer treatment and the COVID-19 pandemic, and to explore the mediating role of meaning in life.

### **Methods**

Using the 6-item BJW scale and the 10-item resilience scale, Study 1 tested the effect of BJW on resilience among cancer patients ( $n = 83$ ) as compared with individuals suffering from chronic diseases ( $n = 131$ ). Study 2 focused on the effects of BJW on resilience among residents ( $n = 638$ ) two months after the outbreak of the COVID-19 pandemic. In addition, life meaning and sense of control were also measured.

### **Results**

Study 1 found that BJW was positively associated with resilience, with a stronger effect among cancer patients compared to those with chronic diseases. In Study 2, a similar positive association between BJW and resilience was found, especially among those lacking control in pandemic. In both studies, meaning in life partially mediated the relationship between BJW and resilience.

### **Conclusions**

The current findings demonstrate that BJW serves as a compensatory resource in coping with health-related challenges, underscoring the importance of integrating social-psychological factors into medical care and health promotion.

*Keywords:* belief in a just world, resilience, meaning in life, compensatory control

## 1. Introduction

Perceiving and maintaining a sense of control are fundamental human needs, which is indispensable for their physical and psychological well-being (Rotter, 1966; Kay et al., 2009; Kelley, 1971). However, various life-threatening events and crises—such as cancer or large-scale public health emergencies—significantly disrupt individuals' health and their sense of control (Taylor et al., 1984; Brailovskaia & Margraf, 2021).

Fortunately, individuals have the capacity to develop compensatory control mechanisms when their sense of control is threatened (Kay et al., 2009). According to justice motive and compensatory control theories, belief in a just world (BJW)—the notion that good deeds get rewarded and bad evils get punished—serves as a key compensatory resource (Anderson, Kay, & Fitzsimons, 2010; Laurin, Fitzsimons, & Kay, 2011; Wu et al., 2011). This belief allows individuals to perceive the world as fair rather than random, providing a psychological buffer against the uncertainties and chaos in which chance or disorder may influence significant life outcomes (Otto & Schmidt, 2007). Over recent decades, an increasing body of research show that BJW can serve adaptive functions, by enhancing psychological resilience and buffering mental health symptoms when lacking control over lives, for example, in the aftermath of traumatic events (Wu et al., 2013; Wu et al., 2009) and during economic or disaster-related adversities (Ho et al., 2010; Callan et al., 2006; Wu et al., 2011).

In the context of cancer treatment, BJW was found to be associated with better psychological adjustment (Park et al., 2008), lower levels of anxiety, and higher quality of life among cancer survivors (Megías et al., 2019; Mahmoud et al., 2020). In the context of major public health crises, such as the COVID-19 pandemic, BJW revealed a protective effect on emotional well-being (Wang et al., 2021) and predicted a lower level of hopelessness (Kiral Ucar et al., 2022). Although these studies suggest that BJW benefits mental health following critical illness, very few researchers have explored the compensatory role of BJW in healthcare settings. Wu et al. (2018)

examined the compensatory control effect of BJW among both cancer survivors and general populations, finding that BJW was a stronger predictor of subjective well-being in cancer survivors compared to their healthy counterparts. However, it remains unclear whether BJW functions as a compensatory resource in different medical conditions, and what is the psychological mechanism in the association between BJW and resilience.

Meaning in life refers to the cognitive evaluation of how meaningful one's life is, grounded in the understanding of personal goals and life confidence (King & Hicks, 2021; Steger et al., 2006). Previous studies have shown that BJW provides future confidence in confronting life advertise and willingness to invest resources in the pursuit of long-term goals (Wu et al., 2013), which can enhance individuals' sense of meaning in life (Igou et al., 2021; Yang et al., 2023). And according to the meaning-making model, a strong BJW can also reduce rumination or repetitive negative thoughts about stressful events, such as cancer experiences, which is a key indicator of successful meaning-making (Park et al., 2008). Moreover, meaning in life has been shown to enhance various mental health-related outcomes, including resilience (Kim et al, 2005), depression (Kleftaras & Psarra, 2012), psychological well-being (Zika & Chamberlain, 2011), and satisfaction (Lightsey & Sweeney, 2008). Research conducted across cultural contexts consistently supports the notion that meaning in life contributes to the development of resilience (Park et al., 2008; Aiena et al., 2016; Ostafin, 2020). Based on these findings, we hypothesized that meaning in life serves as a mediating factor through which BJW influences resilience and functions as compensatory control resources.

The aim of this study is to investigate whether BJW serves a compensatory role in promoting resilience and to examine the underlying psychological mechanisms in the medical conditions. This inquiry will be addressed through two studies. Study 1 examined the compensatory effect of BJW on resilience in patients with highly life-threatening cancers, as compared to those with chronic, less life-threatening diseases. Study 2 explored the compensatory role of BJW in relation to resilience among individuals with varying levels of life control during the COVID-19 pandemic.

Given that BJW tends to exert a stronger compensatory effect among individuals with higher levels of trauma (Wu et al., 2011) and those with lower sense of control (Kay et al., 2010), we hypothesize that in Study 1, BJW had a greater predictive effect on resilience in cancer patients (who experience higher trauma and diminished life control), compared to those with chronic diseases (lower life-threatening risk and moderate life control). In Study 2, we expect that BJW predicted resilience more in individuals with low (vs. high) sense of control. Furthermore, we propose that meaning in life would mediate the relationship between BJW and resilience in both Study 1 and Study 2.

## 2. Study 1

### 2.1. Method

#### 2.1.1. Participants

Patients with cancer and with chronic diseases were recruited as research subjects. In this study, we employed G\*Power to determine the appropriate sample size, adhering to the recommended average statistical power ( $1 - \beta = 0.75$ ) for social science research (Richard et al., 2003). With the effect size for predictor and moderator variables set at  $f^2 = 0.05$  and  $\alpha = 0.05$ , the computed sample size requirement was 107 participants. As such, a total of 218 patients were recruited from a hospital in Beijing.

The cancer group comprised 84 adults during the cancer treatment (47 females, aged 18 to 88) who had been diagnosed with malignant cancer and had received treatment over the past five years. Of these, 24 patients (28.57%) had been diagnosed with genitourinary tumors (e.g., ovarian and breast cancer), 22 patients (26.19%) with digestive system cancers (e.g., gastric and colon cancer), 16 patients (19.05%) with respiratory system cancers (e.g., lung cancer), and 22 patients (26.19%) with other cancers (e.g., thyroid cancer). The chronic disease group included 134 participants (72 females, aged 14 to 87), comprising individuals with kidney diseases (29 cases,

21.64%), cardiovascular diseases (55 cases, 43.31%), both kidney and cardiovascular diseases (26 cases, 20.47%), and other conditions (24 cases, 18.90%).

We also collected subjects' demographic information, including marital status and the level of education and income. See Table 1.

*Table 1.* Demographic information of patients with cancer and chronic diseases.

	Cancer		Chronic Pains	
	N	%	N	%
<b>Gender</b>				
Male	37	44.05%	62	46.27%
Female	47	55.95%	72	53.73%
<b>Marriage</b>				
In relationship	74	88.10%	109	81.34%
Single	10	11.90%	25	18.66%
<b>Education</b>				
Elementary	21	25.00%	27	20.15%
Middle	22	26.19%	33	24.36%
College	41	48.81%	74	55.22%
<b>Income</b>				
Low	26	30.95%	47	34.81%
Middle	48	57.14%	56	41.79%
High	14	16.67%	31	23.13%

### 2.1.2. Materials and Procedure

**BJW.** The 6-item BJW scale (Dallbert, 1999), validated in Chinese (Wu et al., 2011), was used to use assess general just-world belief (e.g. “I think basically the world is a just place” “I am convinced that in the long run people will be compensated for injustices”). The participants were asked to respond on a 1-6 point Likert scale (1=strongly disagree, 6= strongly agree). With a good reliability (Crohnbach's  $\alpha = .85$ ), higher scores indicated a greater level of just-world belief.

**Resilience.** The Chinese version of a 10-item resilience scale (e.g., “I can achieve goals despite obstacles” “I tend to bounce back after illness or hardship”) was employed to measure psychological resilience (Wu et al., 2011; Campbell-Sills & Stein, 2007; Connor & Davidson, 2003). With a good reliability (Crohnbach's  $\alpha$

= .91), higher scores indicated a greater capacity for positive adaptation in the face of adversity.

**Meaning in life.** A 3-item meaning in life (e.g. “I hold my life meaningfully”) was developed based on previous instruments and interviews conducted in our preliminary study (Ho et al., 2010; Ho et al., 2003). Participants rated their responses on a 0-4 point Likert scale (0 = not true at all, 4 = true nearly all the time). With a good reliability (Cronbach’s  $\alpha = .77$ ), higher scores indicated a greater sense of meaning in life.

The questionnaire was distributed individually and completed in the consulting room, after which participants received a gift as a reward. Informed consent was obtained from all participants, and the study protocol was approved by the Institutional Review Board at the Institute of Psychology, Chinese Academy of Sciences.

## 2.2. Results and Discussion

The scores of BJW, resilience, and meaning in life for participants in the cancer group and the chronic disease group are presented in Table 2. An independent samples *t*-test revealed that cancer patients had slightly higher BJW scores compared to those with chronic diseases. Additionally, cancer patients exhibited higher levels of resilience than those with chronic diseases. Regarding the sense of meaning, cancer patients scored slightly higher than those with chronic diseases. See Figure 1 for further details.

*Table 2. Descriptive and correlations of key variables*

	<i>M<sup>a</sup></i>	<i>SD<sup>a</sup></i>	1	2	3	<i>M<sup>b</sup></i>	<i>SD<sup>b</sup></i>	<i>t</i>	<i>p</i>	<i>Cohen’s d</i>
1. BJW	4.57	.96		.21*	.17	4.22	1.00	2.53	0.012	0.35
2. Resilience	2.79	.74	.50**		.45**	2.51	.67	2.93	0.004	0.40
3. Life Meaning	3.47	.70	.26*	.53**		3.23	.76	2.37	0.019	0.33

*Notes.* *BJW* = Believe in Just Word. Lower diagonal = Cancer patients (*N* = 84),  
Upper diagonal = Chronic patients (*N* = 134)

The correlation analysis revealed significant positive association between BJW and resilience ( $r = 0.36, p < 0.001$ ), BJW and meaning in life ( $r = 0.21, p < 0.001$ ), as well as between resilience and meaning in life ( $r = 0.47, p < 0.001$ ). Both the cancer group and the chronic disease group exhibited similar patterns of correlation among these variables. For more details, see Table 2.

A simple moderation model was employed to investigate whether disease status moderated the relationship between BJW and resilience. The results indicated that BJW showed a significant main effect of BJW on resilience ( $B = 0.62, SE = 0.16, p < 0.001$ ,  $\Delta R^2 = 0.17$ ), and that disease status had a significant moderating effect ( $B = 0.86, SE = 0.43, p = 0.004$ ,  $\Delta R^2 = 0.05$ ), with a 95% CI = [0.017, 1.698] that did not include zero. As illustrated in Figure 1, the impact of BJW on resilience was greater for cancer patients ( $B = 0.38, SE = 0.07, p < 0.001$ ), as compared to those with chronic diseases ( $B = 0.14, SE = 0.06, p = 0.014$ ), suggesting that BJW served a compensatory role in the context of high-loss-of-control illnesses.

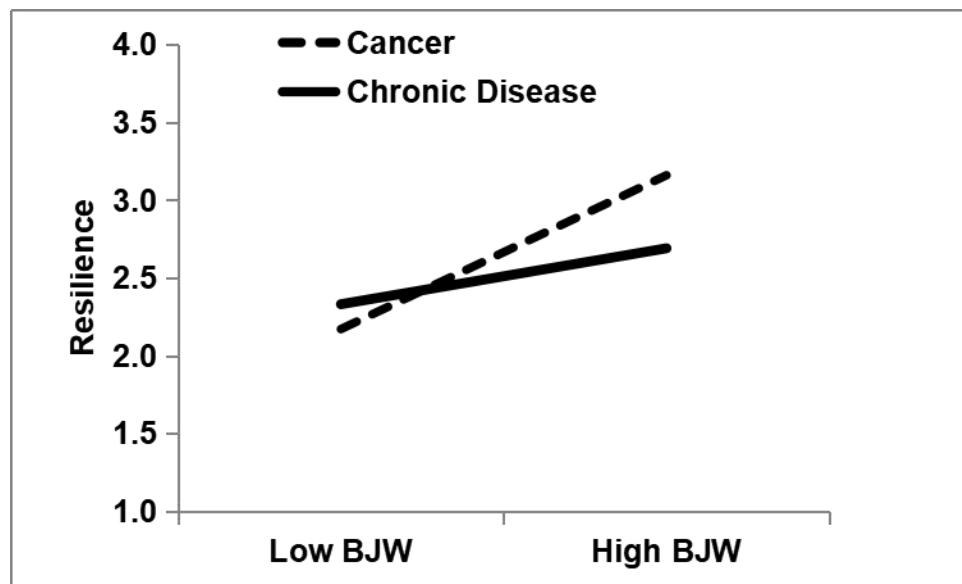


Figure 1. Disease status moderated the effect of BJW on resilience among patients in cancer (dotted) and chronic disease (solid), with gender, age, and marriage status being controlled.

In addition, a simple mediation model was employed to analyze the mediation role of meaning in life between BJW and resilience across the entire sample. The results indicated that BJW showed a significant total effect ( $B = 0.27, SE = 0.04, p < 0.001$ ) and direct effect ( $B = 0.20, SE = 0.04, p < 0.001$ ) on resilience. Furthermore,

the indirect effect of BJW was significant ( $B = 0.06$ ,  $SE = 0.02$ ,  $p = 0.001$ ), with a 95%  $CI = [0.027, 0.110]$  that did not include 0, suggesting that meaning in life partially mediated the effect of BJW on resilience.

In particular, further mediation analyses were conducted to examine the mediating role of meaning in life in the relationship between BJW and resilience among cancer group and chronic diseases group, respectively. The findings revealed that the mediating effect of meaning in life was significant in both groups, in which BJW served as the partial mediator among cancer patients and as the full mediator among those in chronic diseases. For more details, see *Table S1*.

In summary, the results replicated the previous findings about the adaptive function of BJW, and further showed that disease status moderated the effect of BJW on resilience, with a more pronounced effect observed in cancer group with lower life control as compared to those in the chronic disease group with higher life control. Furthermore, meaning in life served as a mediator in the relationship between BJW and resilience; as BJW increases, so does meaning in life, leading to higher resilience.

### 3. Study 2

#### 3.1. Method

##### 3.1.1. Participants

Residents from Hubei Province, China—the epicenter of the COVID-19 outbreak—during the initial surge of the pandemic in March 2020 were recruited as research subjects for Study 2.

In this study, we employed G\*Power to determine the appropriate sample size, adhering to the recommended average statistical power ( $1 - \beta = 0.75$ ) for social science research (Richard et al., 2003). With the effect size for predictor and moderator variables set at  $f^2 = 0.15$  and  $\alpha = 0.05$ , the computed sample size requirement was 107 participants. As such, a total of 638 participants were surveyed. We collected subjects' demographic information, including gender, age, marital status, the level of education and of income. We also asked participants to report to what extent they

were affected by the COVID-19 pandemic, such as whether they had been infected or quarantined and whether their family or friends were infected. See Table 3.

*Table 3. Demographic information and pandemic experiences of the participants*

	<i>N</i>	<i>%</i>
Gender		
Male	245	38.40%
Female	393	61.60%
Age		
<20	167	26.18%
20-30	290	45.45%
30-40	60	9.40%
40-50	73	11.44%
>50	48	7.52%
Marriage		
Single	443	69.43%
in relationship	195	30.67%
Education		
Elementary	49	7.68%
Middle	158	24.76%
College	431	67.55%
Income		
Low	245	38.40%
Middle	268	42.01%
High	125	19.58%
Infection of the SARS-CoV-2		
Yes	10	1.57%
No	628	98.43%
Exposure to the COVID-19 <sup>a</sup>		
Yes	224	35.11%
No	413	64.73%
Quarantine experience		
Yes	448	70.22%
No	190	29.78%

*Notes.* <sup>a</sup> Whether or not the participants' family or friends were infected.

### 3.1.2. Materials and Procedure

BJW was measured using the same 6-item scale as in Study 1, with a good reliability (Cronbach's  $\alpha = .85$ ).

A 3-item short-form resilience scale was used to measure psychological resilience. The items are "Coping with stress makes me feel powerful," "After experiencing hardships, I recover quickly," and "I am confident that I can effectively cope with difficulties". The participants were asked to respond on a 1-7 point Likert scale (1 = Strongly Disagree, 7 = Strongly Agree). With a good reliability (Crohnbach's  $\alpha = .91$ ), higher scores indicated a greater capacity for positive adaptation in the face of adversity.

Meaning in life was measured using the same scale as in Study 1, with a good reliability (Crohnbach's  $\alpha = .91$ ).

Sense of control was assessed using a single item: "Most things in my life are under my control." The participants were asked to respond on a 1-7 point Likert scale (1 = Strongly Disagree, 7 = Strongly Agree).

Informed consent was obtained from all participants, and the study protocol received approval from the Institutional Review Board of the Institute of Psychology at the Chinese Academy of Sciences.

### 3.2. Results and Discussion

The scores of BJW, resilience, and meaning in life for participants were presented in Table 4. Correlation analyses revealed that, in the context of the COVID-19 pandemic, BJW was significantly correlated with resilience, sense of control, and meaning in life. Additionally, resilience was significantly associated with both sense of control and meaning in life.

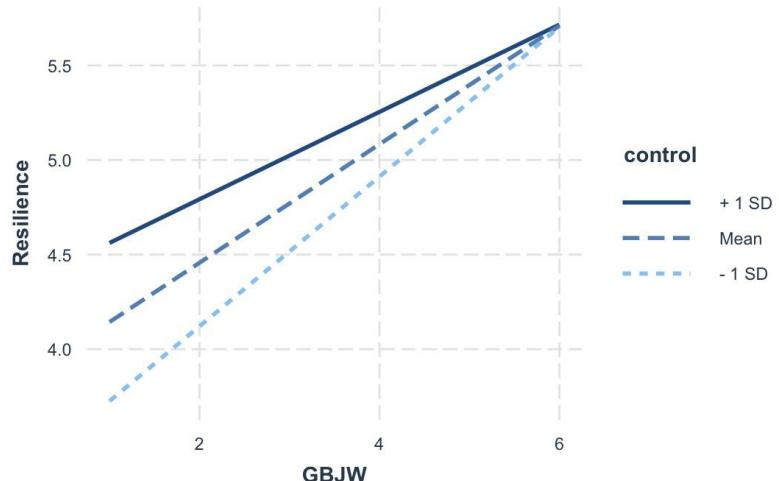
*Table 4. Means, standard deviations, and correlations*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. BJW	4.07	0.95											
2. Resilience	5.06	1.23	0.34**										
3. Sense of control	4.31	1.18	0.44**	0.23**									
4. Meaning in life	4.94	1.41	0.37**	0.46**	0.22**								
5. Gender <sup>a</sup>	1.62	0.49	-0.02	-0.13**	0.07	-0.06							
6. Age	28.41	11.04	0.12**	0.09**	-0.06	0.12**	-0.12**						
7. Marriage <sup>b</sup>	0.31	0.46	0.10**	0.03	-0.03	0.05	-0.04	0.78**					
8. Education	4.49	1.06	-0.04	0.03	0.00	0.03	0.03	-0.45**	-0.34**				

9. Incomes	3.55	1.88	-0.00	-0.01	0.02	0.03	-0.05	0.05	0.09*	0.19**	
10. Infection <sup>c</sup>			-0.03	-0.05	0.01	-0.06	-0.03	-0.01	0.03	0.02	0.04
11. Exposure <sup>c</sup>	0.35	0.48	-0.06	-0.07	-0.01	-0.04	0.04	-0.06	-0.07	0.15**	0.17**
12. Quarantine <sup>c</sup>	0.70	0.46	0.05	0.10**	-0.01	0.07	0.03	-0.09*	-0.05	0.13**	0.09**

Notes. <sup>a</sup> gender was coded as 1 (female) and 0 (male), <sup>b</sup> marriage was codes 1 (in relationship) and 0 (single), <sup>c</sup> infection, exposure, and quarantine were coded as 1 (yes) and 0 (no). \* $p < 0.05$ . \*\* $p < 0.01$ .

A simple moderation model was employed to investigate whether sense of control moderated the relationship between BJW and resilience. Gender, age, marital status, income, level of education, infection status and whether exposure to the virus and quarantine status were included as control variables. The results indicated that BJW showed a significant main effect of BJW on resilience ( $B = 0.62$ ,  $SE = 0.15$ ,  $p < 0.001$ ,  $\Delta R^2 = 0.18$ ), and a significant interaction between BJW and sense of control ( $B = -0.07$ ,  $SE = 0.03$ ,  $p = 0.048$ ,  $\Delta R^2 = 0.01$ ), with a 95% CI = [-0.131, -0.007] that did not include zero. As illustrated in *Figure 2*, the effect of BJW on resilience was greater among those with lower sense of control ( $B = 0.41$ ,  $SE = 0.06$ ,  $p < 0.001$ ), as compared to those with higher sense of control ( $B = 0.26$ ,  $SE = 0.07$ ,  $p < 0.001$ ), suggesting that BJW served a compensatory role in the context of COVID-19 pandemic.



*Figure 2.* Sense of control moderated the effect of BJW on resilience

In addition, a simple mediation model was employed to analyze the mediating role of meaning in life in the relationship between BJW and resilience. The results

indicated that BJW showed a significant total effect ( $B = 0.42$ ,  $SE = 0.05$ ,  $p < 0.001$ ) and direct effect ( $B = 0.25$ ,  $SE = 0.05$ ,  $p < 0.001$ ) on resilience. The indirect effect of BJW was significant ( $B = 0.17$ ,  $SE = 0.03$ ,  $p < 0.001$ ), with a 95%  $CI = [0.112, 0.232]$  that did not include 0, suggesting that meaning in life partially mediated the effect of BJW on resilience.

Based on scores for the sense of control, participants were divided into two groups: a low-control group (-1 SD) and a high-control group (+1 SD). We examined the mediating role of meaning in life in the relationship between BJW and resilience across these two groups with different levels of control, respectively. Our findings revealed that among the low-control group, the relationship between BJW and resilience was partially mediated by meaning in life. Conversely, in the high-control group, the mediating effect of meaning in life was not significant. For further details, please refer to *Table S2*.

In summary, the results extended the adaptive function of BJW into the field of public health crises, and further showed that sense of control moderated the impact of BJW on resilience, with a more pronounced effect observed in low-control group compared to those in high-control group during COVID-19 pandemic. Furthermore, meaning in life served as a mediator in the relationship between BJW and resilience, as BJW increases, so does meaning in life, leading to higher resilience.

#### 4. General Discussion

The current findings demonstrate that BJW serves as a compensatory resource in promoting resilience and restoring a sense of meaning among individuals facing significant health challenges, such as cancer and the COVID-19 pandemic. Study 1 compared cancer patients, who face high life-threatening risks and extreme loss of control, with individuals suffering from chronic diseases, and the results revealed a stronger association between BJW and resilience in cancer patients than in those with chronic diseases, indicating the heightened importance of BJW in more severe health contexts. Study 2 extended these findings to the context of the COVID-19 pandemic,

showing that BJW was positively associated with resilience, especially among individuals lacking control over lives. Furthermore, both studies identified meaning in life as a partial mediator between BJW and resilience, highlighting the importance of life meaning in coping with health-related stressors. These findings suggest that BJW plays as the compensatory resources in promoting mental health during major health crises, with potential implications for integrating psychological resources into medical care.

This study extends previous research on the adaptive function of BJW in relation to resilience across disadvantaged contexts and deepens our understanding of its role as a compensatory control mechanism. It broadens the application of BJW by examining its impact on resilience in medical settings, beyond the contexts of natural disasters and impoverished regions in earlier studies (Wu et al. 2011, Wu et al., 2013), in which the positive effects of BJW on resilience were found in the aftermath of the Wenchuan Earthquake, and among socioeconomically disadvantaged populations. However, there has been a lack of systematic investigation into the role of BJW within medical contexts. Our research fills this gap by being the first to examine BJW's function in coping with major health crises, particularly in patients facing life-threatening illnesses, such as cancer, and in the context of public health emergencies like the COVID-19 pandemic. The findings confirm that BJW acts as an compensatory control in these settings, suggesting that BJW not only helps individuals restore a sense of control in broader societal crises but also fosters resilience in the medical domain.

Next, the present research provides new empirical evidence for compensatory control model (Kay et al., 2009). While previous research has explored the compensatory role of BJW in situations where individuals experience a loss of control, those studies did not examine the mechanisms and boundary conditions that underlie BJW's compensatory control function (Wu et al., 2011; Wu et al., 2013). More specifically, prior research seldom employed rigorous moderation analyses to clarify and quantify the compensatory model of BJW in the medical contexts. By contrast, the current studies address this gap by employing moderation analyses to further

validate BJW as a compensatory resource in varying degrees of sense of control. This methodological approach enables a more understanding the compensatory mechanisms of BJW and provides a new framework to explore compensatory control model in diverse contexts.

Furthermore, the current findings enrich our understanding of the role of meaning in life (Park, 2008). The results indicate that BJW not only directly showed a positive effect on resilience but also indirectly enhances individuals' psychological recovery in face of adversities by increasing their sense of meaning in life. When individuals experience a loss of control (e.g., during the major illness or public health crises), BJW helps them reinterpret and understand their experiences by instilling a sense of justice and order, thereby enhancing their sense of meaning in life. The meaning derived from BJW becomes a key psychological resource, enabling individuals to integrate seemingly random, chaotic, or unjust events into a coherent and meaningful life narrative. This not only alleviates feelings of helplessness and despair but also fosters more positive outcomes, which in turn promotes resilience. These findings highlight the importance of meaning as a key psychological mechanism through which BJW fosters resilience.

It should be noted that there are some limitations that restrict their generalizability of the current findings. Firstly, the present research is based on cross-sectional surveys, rather than a longitudinal study or behavioral experiment. Future studies may employ follow-up surveys and behavioral indicators, to examine the robustness of the findings reported here. Secondly, while the current studies focus on the impact of BJW on resilience in the context of illness, there is limited exploration of the effect of illness on individuals' BJW. In our study, we also found that patients' BJW was not weakened by illness, and cancer patients (with a high life-threatening condition) even exhibited a stronger general BJW compared to those with chronic diseases (low life-threatening), which was consistent with the findings among adolescents exposed to school rampage especially when they lack of social support and satisfaction with life (Stupnianek, Wu, & Schmitt, 2022). Future research may need to further explore the impact of major illnesses or public health events on

the change in BJW to gain a deeper understanding of the compensatory effects of BJW.

## 5. Conclusion

In summary, the current studies highlight the significant role of BJW as compensatory resources for individuals suffering from major health crises. Both two studies consistently demonstrated that BJW is more strongly associated with resilience among those lacking control, such as patients with cancer (vs. chronic diseases) and residents with more loss of control during the COVID-19 pandemic. Furthermore, meaning in life partially mediated the effect of BJW on resilience. These findings provide valuable insights for integrating social-psychological interventions into medical care practices.

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*Table S1. Mediating role of meaning in life between BJW and resilience among cancer and chronic diseases group (Study 1)*

	Cancer group				Chronic diseases group			
	B	SE	p	95%CI	B	SE	p	95%CI
Total effect	0.38	0.07	0.000	[0.239, 0.529]	0.14	0.06	0.016	[0.027, 0.257]
Direct effect	0.30	0.07	0.000	[0.167, 0.433]	0.09	0.05	0.096	[-0.016, 0.196]
Indirect effect	0.08	0.04	0.032	[0.027, 0.185]	0.05	0.03	0.042	[0.008, 0.114]

Notes. BJW = Belief in a just world.

*Table S2. Mediating role of meaning in life between BJW and resilience among low-control group and high-control group (Study 2)*

	Low-control group				High-control group			
	B	SE	p	95%CI	B	SE	p	95%CI
Total effect	0.46	0.11	0.000	[0.238, 0.674]	-0.02	0.15	0.913	[-0.319, 0.286]
Direct effect	0.27	0.10	0.008	[0.071, 0.473]	-0.07	0.16	0.649	[-0.381, 0.239]
Indirect effect	0.18	0.08	0.018	[0.054, 0.369]	0.05	0.06	0.793	[-0.037, 0.204]

Notes. BJW = Belief in a just world.